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USSR Report

TRANSPORTATION

No. 9

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AIR

CIVIL AVIATION MINISTER BUGAYEV INTERVIEW

Moscow KRYL'YA RODINY in Russian No 2, Feb 80 signed to press 11 Jan 80 pp 2-5

[Interview with Chief Aviation Marshal B. P. Bugayev, USSR Minister of Civil Aviation, by V. Nikolayev: "Civil Aviators' Day"]

[Text] On the eve of Civil Aviators' Day, Minister B. P. Bugayev spoke with our correspondent about the multifaceted activity of Aeroflot.

[Comment] This year, Aeroflot Day, which the country celebrates in February, will be held in an atmosphere of great political and labor upsurge. Aviators accepted with unanimous approval Comrade L. I. Brezhnev's speech at the November (1979) CPSU Central Committee Plenum and the resolutions of the Plenum and the USSR Supreme Soviet session. Turning to these very important documents, discussing and studying them, they have become more deeply aware of the economic and political importance of the results for 1979 and all the preceding four years of the five-year plan and see clearly the prospects for its concluding stage.

[Question] Boris Pavlovich, as we know, in the 10th Five-Year Plan, the party and government set civil aviation the task of meeting more fully and promptly the needs of the national economy and the people for air shipment, of improving transport ties between its economic regions....

[Answer] Civil aviation is a branch whose national economic importance is growing with each passing year. The search for new ways of attracting an ever-increasing number of passengers to our transport, improvement in the quality of passenger ground and air services, and the appearance of comfortable new fast aircraft have helped us meet more fully the needs of the population. The introduction of advanced technology has enabled us to significantly increase the productivity of aviation equipment. The state plan for the fourth year of the five-year plan was met ahead of schedule for a majority of indicators: upwards of 100 million passengers and about three million tons of rush freight and mail were shipped by air. The amounts and range of work being done by Aeroflot planes and helicopters in various branches of our economy have increased considerably. In terms of that

indicator, civil aviation had already met the plan assignments of the first four years of the five-year plan in early November of last year. Comrade L. I. Brezhnev, General Secretary of the CPSU Central Committee and Chairman of the USSR Supreme Soviet Presidium, congratulated the aviators on their great labor victory.

One example of the strained work of Aeroflot this five-year plan would be its help in the social and economic development of Siberia, the Far East and the Far North. A significant role was played by civil aviation workers in the successful resolution of this important party and government task. That is why their participation is of the broadest, most multipurpose character. Today, hardly a single city or settlement built in these regions is born without the help of aviation. It delivers surveyors and construction workers, materiel, equipment and materials, and it serves as the sole means of communications until railroads or highways are built.

For example, we set up special shipments of builders, petroleum and gas field workers, geologists and lumberjacks. With the introduction of this type of service, it was no longer necessary to build special population centers in regions being developed or surveyed, where specialists had been forced to live for long periods, sometimes with their families. Now, helicopters deliver comfortable temporary shelters there, followed in due time by special worker detachments.

Attaching special importance to serving remote areas of the country, the Ministry of Civil Aviation has worked out long-range general plans for developing its Krasnoyarsk and Tyumen' administrations in 1981-1990. Similar long-range programs will be drawn up for the Magadan, Far-Eastern and West-Siberian administrations of civil aviation.

[Question] We have seen in the press the figure that nearly 400 organizations of various branches use the services of civil aviation in Tyumenskaya Oblast alone. Who, comrade minister, would you say are the main Aeroflot customers?

[Answer] First of all, geologists. In Siberia and the Far East, they account for more than a third of all work using aviation in the national economy. Aviation has "changed" the geological process itself, making it no longer seasonal. The opportunities geologists have have also been broadened considerably. For example, introduction of aerial photography as a method of geological surveying has provided the national economy with a significant savings. A geological map of sites along the BAM was drawn up in a few years with the help of aviators, while that would have taken several decades using the traditional methods of geological surveying. The resolutions of the 25th CPSU Congress anticipate continued expansion of high-altitude geological surveying means.

Aviators work shoulder to shoulder with builders and petroleum and gas field workers. Thus, almost 90 helicopters were operated daily in installing the Surgut-Polotsk gas main. Builders of the Samotlor-Al'met'yevsk and Okha-

Komsomol'sk-on-Amur oil pipelines, the Tyumen'-Surgut Railroad, the Bilibinskaya Nuclear Power Plant, the electric power transmission lines and, of course, the BAM [Baykal-Amur Trunk Line], have had many good things to say about Aeroflot.

Aviators help Far East fishing industry, not just in guiding ships to shoals of fish, but also, for example, in research connected with planning a catch. Planes and helicopters ensure practically year-around ship convoy escort through the ice floes of the northern seas, helping to pick optimum routes. This means faster and cheaper delivery of hundreds of tons of important national economic freight. "Air firemen" help put out forest fires. "Flying polyclinics" made about 70,000 emergency runs last year.

Aeroflot assistance in the comprehensive development of agriculture, in the struggle for high yields, occupies a special place. Each year, an average of up to 90 million hectares of land is treated with various kinds of chemicals from the air, nearly 500 million hectares during the 10th Five-Year Plan as a whole. No other country in the world uses aircraft in agriculture on such a scale. Today, it would be hard to find a sovkhoz or kolkhoz which has not availed itself of the services of aviation. The return is expressed both in additional yield and in a significant economic impact.

It has been estimated that upwards of 100,000 tractors are freed for other work when 100 million hectares of land is treated from the air, which is done at the most favorable agrotechnical times. Annual additional revenue to the state from using aviation in agriculture is more than 1.5 billion rubles. The role of civil aviators in increasing agricultural production was evaluated highly at the July (1978) CPSU Central Committee Plenum and in greetings from L. I. Brezhnev.

[Question] The list of Aeroflot national economic occupations is quite long, but we are still accustomed to think of Aeroflot as a passenger service....

[Answer] That is understandable, since transporting passengers is the main occupation of civil aviation. Aeroflot is an important, integral part of the nation's unified transport system; air transport is now second in total passenger turnover in intercity transport. Let me note in this connection that today, almost one in every three residents of the Soviet Union uses its services. By providing rapid delivery of passengers, we actively facilitate increasing the effectiveness of social production. Thus, the savings in the time of Soviet laborers in the 10th Five-Year Plan due to our efforts will be more than half a billion man-days. This concernsfirst of all the very long routes, where upwards of 80 percent of those using transport prefer the fastest method.

We pay particular attention to developing air trunk lines. We have already opened non-stop runs from Moscow to Petropavlovsk-Kamchatskiy. There is a direct run from our capital to Pevek on the distant Chukotka River. A program has been worked out for expanding transport services to remote regions

of the country, a program which anticipates, in particular, capital investments of 60 million rubles just in renovating airports in Yakutsk, Magadan and Noril'sk. When flights in large, fast planes begin to these cities, one of the most important tasks facing us, of providing fast, comfortable transport to remote, distant zones of the Soviet Union, will to a considerable extent have been resolved.

Here, I should like to note that civil aviation is not competing with rail transport. Rather the contrary. By taking on a significant portion of the passenger shipments, it helps increase rail productiveness by reducing the number of passenger trains, which permits an increase in freight traffic and freight turnaround. Specialists have estimated that Aeroflot's flying a billion passenger-kilometers is equivalent to dispatching a thousand passenger trains. This freeing of the railroads for other uses provides an opportunity for increasing their throughput capacity and of thus dispatching an additional 2,000 freight trains.

[Question] The 10th Five-Year Plan is a five-year plan of efficiency and quality for civil aviators as well. An important indicator of their work is a high level of passenger services. How is this level maintained and what is being done to raise it?

[Answer] "Everything for the Passenger!" -- this slogan is the center of attention in all Aeroflot links. Modern air terminals are being built, and by the end of the five-year plan, new air-terminal complexes will have begun operating in many large cities of the country. Each year, we open more than 50 new routes and increase flight frequency. For example, about 4,500 flights were made in 1979 just on the central schedule. New forms of passenger services are being introduced at ticket agencies, airports and on board the aircraft. For example, many air travelers like first-class service, and we propose expanding it.

In the fourth year of the five-year plan, the sale of return tickets with guaranteed dates of departure from Moscow was set up in more than 20 cities of the Far East and Far North, and Muscovites were able to acquire "there" and "back" tickets on flights to more than 100 cities in the country. A unionwide automated control system, the ASU-5, is currently being developed to improve ticket sales and seat reservations. One link in the ASU-5 system, that governing sales and reservations in the Moscow zone, is to begin operation in 1980 and will meet the needs of about 20 million passengers a year. For comparison's sake, let me say that the "Sirena" reservation and ticket sales system used in the capital, to which Aeroflot ticket agencies in another 45 cities are switched in, has sold tickets to more than 50 million passengers in eight years of operation.

[Question] Constant up-dating of the Aeroflot fleet of planes probably also serves to improve quality and efficiency. What can you tell us in this regard?

[Answer] I should like to note that the introduction of new technology is one important feature of the development of civil aviation in the 10th Five-Year Plan. The Il-76T "air truck" is already being used to haul self-propelled equipment, materiel and bulky freight weighing up to 40 tons. And only half an hour is needed to load or unload a vehicle using the on-board means of mechanization. The Il-76T can be operated at very low temperatures and can take-off and land at airfields without surfaced runways. Use of the specialized Mi-10K helicopter-crane in unique construction and installation jobs has provided a perceptible economic impact.

A new modification of the Tu-154B, which can carry 20 passengers more than the base model, has begun flights. The Czech-built 17-seat L-410 "microairbus" has reached local air routes. By the start of the 11th Five-Year Plan, jet aviation will "shoulder" more than two-thirds of all Aeroflot passenger shipments.

We are especially hopeful about the appearance on medium-range runs of the first domestically-produced wide-body airbus, the Il-86, which can transport up to 350 passengers. This aircraft is superior to many now in operation in terms of a number of important specifications. It is rather easy to operate and does not require large expenditures on maintenance. In spite of its large size, the Il-86 is not ponderous, thanks to the harmony of the shapes of its fuselage, wings and engines. Its appearance on the air routes will not require renovating airfields or airfield equipment; we anticipate modern service and a simplified baggage registration procedure. The passenger reaches the baggage compartments in the lower deck of the airbus by ladder and then climbs stairs to one of three passenger compartments in the upper deck.

Conveniences also await passengers on the new Yak-42, designed to carry up to 120 passengers on medium-range routes.

There has also been concern for local routes. One other "microairbus," the 15-seat An-28, a comfortable two-motor aircraft which will replace the An-2 which has served us well, is being tested.

[Question] Boris Pavlovich, how is Aeroflot preparing for the 22nd Olympic Games? A large influx of passengers is probably expected.

[Answer] Olympiad-80 has unquestionably caused adjustments in our plans. As is known, Aeroflot is the general shipper for the Moscow Olympiad, and that places great responsibility on us. We have long been preparing for this world celebration of sport. An "Olympics" schedule has already been sent out to the Olympic committees and to foreign transport agencies and travel bureaus. Aviation equipment is also being readied for Olympics shipments. In fact, both scheduled flights and additional flights will be made during the Olympiad. Specialists estimate that nearly a million Games participants and guests will avail themselves of Aeroflot services during the Olympiad.

Work is complete on civil aviation Olympics construction projects. The doors of the passenger pavilion in the capital's main international harbor, Sheremet'yevo-1, have been opened wide, and the new Sheremet'yevo-2 air-terminal complex has been put into operation. A new air terminal will greet Olympics regatta participants and spectators in the capital of Estonia.

Graduates of the first "Olympics" contingent from last summer's Leningrad Aviation-Technical School graduating class will be working in the airports of cities in which Olympiad tournaments are being held. The crews of Aeroflot international runs are being trained and retrained using a special program.

[Question] It would be hard to imagine international cooperation today without air transport. What could you tell us, comrade minister, about Soviet civil aviation activity in this connection?

[Answer] Helping develop the diverse ties our state has with other countries of the world has been one of the tasks of aviation since the first days of its existence. The number of air routes to places outside the Soviet Union is increasing year by year. In 1979 alone, Aeroflot planes began regular flights on 10 new international routes. Thus, the number of countries to which Soviet civilian planes fly has increased to 84.

Aviation cooperation is being developed especially fruitfully with the socialist states. The results received a high evaluation at the 8th meeting of the CEMA Permanent Commission on Civil Aviation which was held in the summer of 1979 in Kiev and which worked out specific steps for fuller assistance in actualizing the Comprehensive Program of Socialist Economic Integration.

In particular, we are building a good business foundation for cooperation in the area of scientific-technical exchange with a number of capitalist states as well, for example, with France, Switzerland and others. It concerns the design, construction and operation of airports, flight safety, air traffic control, and monitoring the fitness of the aircraft fleet.

As an active participant in world air communications, the Soviet Union is facilitating the fruitful development of international cooperation as a whole. That is precisely the aim of its activity in the International Civil Aviation Organization (ICAO). On the initiative of the USSR, the ICAO has adopted a number of resolutions connected with economic, legal, ecological and technical problems of developing world civil aviation.

[Question] Boris Pavlovich, the 10th Five-Year Plan is special for civil aviation workers: A USSR Supreme Soviet Presidium ukase last year instituted Aeroflot Day. How are aviation workers responding to this high recognition of their labor?

[Answer] This evaluation of our activity is a good moral incentive to improve the work of all subdivisions, of each member of the many thousands-

strong Aeroflot collective. More than 70 aviation enterprises and about 2,000 crews and brigades have joined in a movement to meet the assignments of the 10th Five-Year Plan by the 110th anniversary of the birth of V. I. Lenin. Eighty percent of the transport aviation crews have supported the initiative by aviators of Domodedovo, "For Each Flight, High Productivity and Excellent Conformity to Flight Evaluation Norms." All aviation workers have assumed obligations connected with transforming Aeroflot into a benchmark for transport.

As before, our concern remains to increase the efficiency with which the aviation fleet and material-technical resources are used. This is a struggle to improve the quality of passenger services and the strictest fuel and energy economy. "The efforts of each collective and every workers must be aimed at saving fuel and energy," said L. I. Brezhnev at the November CPSU Central Committee Plenum.

Through the joint efforts of the ministries of civil aviation and aviation industry, a comprehensive program of lowering fuel expenditures in the main fleet of civilian aircraft has been worked out. We are working to straighten routes, choose the most economical flight procedures and use the most advantageous flight altitudes, with consideration of the change-over to the new cardinal altitude system.

We are paying a great deal of attention to further improving planning and strengthening the influence of the economic mechanism on improving production efficiency and work quality. It is important to ensure the efficient use of everything available to Aeroflot, to rely primarily on intensive factors of growth in shipment volume and other types of aviation services to the national economy, to introduce scientific-technical achievements and leading experience into production more widely.

"Civil aviation workers have accepted the theses and conclusions put forth in Comrade L. I. Brezhnev's speech at the CPSU Central Committee Plenum as a fighting program of action," said B. P. Bugayev in conclusion. They are fully resolved to actualize the resolutions of the Plenum, to meet plans and obligations with honor, to eliminate management shortcomings. Not satisfied with the frontiers reached, the many thousands-strong Aeroflot collective is constantly seeking ways of further improving efficiency and quality and is fully resolved to successfully meet the assignments of the concluding year of the five-year plan.

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AIR

'SIRENA' SYSTEM TO BE REPLACED BY ASU-5

Moscow GRAZHDANSKAYA AVIATSIYA in Russian No 1, 1980 pp 20-21

[Article by Yu. Lovskiy, deputy chief, Glavagentstvo MGA [Main Airflight Information Agency, USSR Ministry of Civil Aviation], and M. Levin, chief of the ASU-5 software division, GVTs GA [Main Computer Center for Civil Aviation]: "From 'Sirena' to the ASU-5"]

[Text] Ticket sales and seat reservations for transit passengers have been made with the assistance of the "Sirena" automated system for about 8 years at the ministry of Civil Aviation's Main Airflight Information Agency. During this time aviation workers in the capital and many other cities in the country have become accustomed to "Sirena" and cannot imagine working without it now. But this is not just a matter of habit. Air transport of passengers has increased so much lately that it is simply impossible to cope with the current volume of work without using computer equipment. It is sufficient to say that "Sirena" sold up to 60,000 and more seats daily during the summer period last year. And more than 40 million passengers in all have availed themselves of its services during its operation.

The system has been automating the assignment and return of seats and the sale of air tickets. However, many operations have remained unautomated. Thus the sale of a ticket through "Sirena" takes about 1.5 minutes; in the process, composing the request, the response of the system and the printing of a ticket take a few seconds. But before composing the request on a keyboard, the cashier must look at the schedule to determine the number of the flight, and after receiving the printed ticket he must note on it and the control stub the first and last name and patronymic of the passenger, indicate the number of his document, specify where registration for a given flight takes place--at the airport or the municipal air terminal, and apply the appropriate stamp.

Another example. The sale of seats reserved for certain institutions cannot be grouped with high-volume operations, since relatively few persons are concerned with this; for this reason, it is not covered by "Sirena." But the retention of two processing methods--automated and

manual--is fraught with errors, and particularly the possibility of "freezing" unoccupied seats. A number of unautomated or incompletely automated operations still exist.

In conformity with the coordination plan of the USSR State Committee for Science and Technology, an All-Union automated system for controlling the sale of tickets and seat reservations on domestic air routes (ASU-5) is being developed. It will consist of several centers located in different regions of the country. The Moscow center of this system will replace "Sirena" and provide for the dispatch of up to 20 million air travelers annually. In addition to an increase in the number of passengers served, a significant expansion of the center's operating functions, compared with the system now in operation, is envisaged. At the same time, ones which facilitate and improve aviation workers' working conditions also are being introduced. Together with the specialists engaged in development, the collective of the Glavagentstvo: dispatchers of the "Sirena" operations control center, cashiers, finance and planning workers--in short, all those who will have to operate the new equipment in the Moscow ASU-5 center--is taking an active part in this work.

What kind of changes will take place in the work of the Glavagentstvo and the Aeroflot agencies connected with it in the first stage of the Moscow center's introduction? First of all, the number of scheduled and unscheduled flights monitored by the system will be increased. In this connection, the necessity of selling tickets manually for certain additional flights before holidays, as is done now, will not arise. The system is designed for 24-hour operation, with an interval of just an hour, needed to organize sales on the next day. Because of this, service for passengers in cities east of Moscow, where interruption in "Sirena" operation now amounts to several hours because of the time zone difference, will be improved. The possibility of leaving in the system those flights whose departure is delayed for some reason and carried over for a day or two is envisaged.

To request a seat under the new system the passenger and cashier need not know the number of the flight for which a ticket is desired. It is sufficient to indicate the preferred departure time or the time of day (morning, evening) and the date, and the system itself will suggest one or several of the next flights for selection. The cashier at first can just explain which flight has an available seat and confirm it himself, and then enter in the system the data needed to make up the ticket: first and last name and patronymic of the passenger, the number of his document, the form of payment, and so forth.

It has been planned to fully automate the filling out of the ticket, including the data needed on the passenger, the form of payment, and payment documents. Under the combined form of payment the system determines the amount of the additional payment as cash and enters both sums

in the appropriate columns of the ticket. The ticket indicates the class in which the passenger is flying, his seat, and the time for beginning registration in the city air terminal and at the airport. In a word, everything is done so that the cashier is relieved of the need to make any manual notations whatsoever. These data, of course, must be composed and transmitted to the machine, but with the aid of a keyboard, like a typewriter. But such composition takes much less time.

A new ticket has been developed for the All-Union system which takes into account any form of payment, with or without passes. There are margins on it for the automatic entry of all the necessary notations. The ticket also has been designed for a flight with transfers.

The ASU-5 provides for automating the formulation of a cash record (massovyy finansovyy otchet). It will be put together not only for the ticket sales operations performed by the system, but also for other operations (additional fees, the return of sums for unused tickets, and baggage handling). For this the cashier should enter in the system the data on all his financial operations during work. At any time the cashier or an auditor will be able to reproduce on a screen the data on the current condition of the ticket office and receive a financial record in printed form at the end of a shift. When necessary, any operation performed during a shift, or answers to inquiries, such as which tickets were sold in a given time period, for a certain flight, and so forth, can be seen directly on the screen. This capability is made available not only for cashiers, but for workers in a number of other services. All operations connected with returning money to passengers for unused tickets will be simplified. The system itself will determine if a flight is delayed, and will calculate the sum subject to return, taking into account the time the flight was refused and the form of payment for the ticket. All these operations will then be reflected in the record.

As already stated, the sale of a reservation for institutions, although not a high-volume operation, requires better attention, careful control, and high management efficiency in the transferral of available seats for sale in some final stage. This work also will be fully automated. The system will begin to perform ticket sales based on the codes of the institutions entered in the request by the cashiers--the holders of a reservation, removing the reservation at an established time, and taking stock of and keeping a statistical record of seat use.

One of the characteristics of the Moscow terminal area is the transport of a large volume of mail by aircraft. Frequent changes in the mail maximums and their fluctuation according to the days of the week entail a need to increase or reduce the norms for ticket sales. The automated system provides for calculation of the number of seats presented for sale for each flight, taking into account the number of seats in the aircraft, the maximum commercial carrying capacity of the aircraft, the normative

average passenger weight in accordance with the seasons, and the average volume of baggage and the mail maximum. Practical and accurate calculation of the norms for ticket sales for each flight will make it possible to load the aircraft more efficiently.

Of course, this is possible only under the condition that the maximum commercial carrying capacity reported to the Glavagentstvo is close to the actual capacity. And here it is appropriate to mention one urgent matter. We often encounter underestimation of these figures by the Moscow airports. This prompts passengers to come to airports with the intention of departing on a ticket provided earlier than the time specified on it. As a result, unnecessary commotion and irritability develop, but aircraft nevertheless often depart underloaded.

Similar situations also exist in cases when aircraft with different numbers of seats are operated on the same air routes and their actual number--often greater--becomes known only immediately before departure. Automation of the calculation and correction of the norms of ticket sales will make it possible to more fully utilize opportunities for departure. But for this, correct and timely data on aircraft passenger capacity and flights on aircraft of the same cabin configuration will be necessary.

Unfortunately, for various reasons the "Sirena" system has not succeeded in organizing the collection and analysis of diverse commercial statistics well enough. The ASU-5 being developed will accumulate extensive statistics characterizing in accordance with more than 20 indicators the sale of seats, the dynamics of passenger demand, the activities of subunits of the Glavagentstvo and the agencies of other cities which are subscribers of the Moscow center, as well as on the work of the system itself. In particular, data will be put together on the dynamics of the demand for each flight, which then will enter the TsNII ASU GA [Central Scientific Research Institute for Automatic Control Systems in Civil Aviation] for use in automated systems in formulating plans and schedules for aircraft flights.

The Moscow center is being planned as one of the principal bases for the unified All-Union ASU-5. In the first stage it will also include the Riga center being built. Then other peripheral centers, which can be subdivided into large ones designed to serve up to 6 million passengers annually, medium-sized ones to serve up to 3 million, and small ones to serve up to 1.5 million passengers, also will be introduced. It is being proposed to equip them with electronic computers of one class of the SM-2 type. Depending on the number of departures, they will have up to four such computers. The Moscow center, as the largest, will be established on the basis of a complex of seven computers.

For the Moscow and large- and medium-sized centers a specialized operational system is being developed, oriented to the tasks of high-volume service--such as management of ticket sales and seat reservations. It will make it possible to improve overall productivity and reliability of the complex, to reduce the time for serving passengers, and to ensure exacting preservation and confidence in the data stored in the system.

With the objective of improving management, a system of automated card files is being developed. Each card file has been specialized. It consists of cards for a specific function. For example, the "card file of flights" will consist of flight cards. In having this automated system available, personnel of the agency will practically perform such operations as making new cards, correcting or discarding old cards, retrieving and reading cards which respond to given conditions, calculating statistical indicators, and the like.

In the process of developing the system it is necessary to resolve a number of problems of a scientific research nature. Thus, to check out the programming software and perform test operations, a test (adjustment) complex has been established in Moscow. In preparing to put the system in operation and immediately after its introduction, it will be required to carry out a number of measurements of its performance, which will be the basis for developing a model plan for ASU-5 centers.

Determination of the number of centers has been specified for the 11th Five-Year Plan. In the process of this determination, an increase in the functions performed by centers also will take place. In particular, as a result of the consolidation of centers, the sale of a ticket to a passenger traveling with transfers will prove to be possible by means of automatic seat reservation.

Introduction of the centers of the All-Union ASU-5 system will contribute to a new upswing in the standard of service for passengers in our air transport.

8936
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MOTOR VEHICLE DEFECTS, REPAIR PROBLEMS

Motor Vehicle Official Comments

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 23 Jan 80 p 2

[Article by N. Alferchik, deputy minister of BSSR Motor Vehicle Transport: "How Vehicles are 'Healed'"]

[Text] One day, the director of a motor vehicle enterprise, paging through the annual reports of the union and republic central statistical administrations, said with bitterness:

"Not a single word about repairpeople. It's as if we didn't have any..."

His chagrin is justified. Hundreds of plants belonging to many ministries and departments repair motor vehicle equipment today. The volume of motor vehicle repair work in this country is very impressive. Plants involved in "capital" work turn out almost 5 billion rubles of production every year. In this connection, 500,000 motor vehicles are returned to service and more than 5 million engines and various assemblies and units for them.

Few changes have taken place in this sphere in recent years. Take Belorussia. The production association, Avtoremont, was created on a base of six plants. Almost all the enterprises have been modernized. Component technological specialization and inter-plant cooperation are being developed. Moreover, the motor vehicle repair people of Belorussia and the Baltic republics have agreed on inter-departmental and inter-republic cooperation, although admittedly to a limited degree. Motor vehicles of the MAZ model, for example, are being restored in Lithuania, Moskviches at our plants, and Ikarus buses in Estonia. The same thing is being done with a number of assemblies and units.

Specialization has made easier the introduction of a complex system for the administration of production quality and the development of the Avtoremont Automatic Control System, which already functions in part. Contacts with science have expanded. Now the association cooperates with institutes of electric welding imeni Ye. O. Paton and of extra hard materials of the Ukrainian SSR Academy of Sciences, with an institute for the mechanics of metal-containing polymer systems and solid-state

physics and semiconductors of the RSSR Academy of Sciences, and with many industrial scientific subdivisions. And what is remarkable is that, while before, links with scientists had a casual nature and production agreements were concluded for a short period, now the tendency is growing more distinct toward long-term cooperation, toward joint solution of large technical problems.

All this permitted a 15-percent increase over the last seven years of the capacities of enterprises and a similar increase in the motor capacity of the restored equipment. And, note, that this was done without additional capital investment.

A growth in the normative net production will be planned for Avtoremont in the second half of this year as an experiment in accordance with the decree of the CPSU Central Committee and the USSR Council of Ministers on improving the economic mechanism. Preparations are actively under way for this both in the association and in the republic's Ministry of Motor Vehicle Transport. In the ministry, in particular, seminars were conducted in which was studied the experience of the Moscow motor vehicle repair enterprises which went to a new system several years ago. Also studied was the methodology of USSR Gosplan. Preparations have entered the concluding stage and norms are being calculated at the plants.

In the process of repair, plants are now more interested in installing on vehicles, as much as possible, parts which were formally in use but are still serviceable, as well as rebuilt parts. As a result, the production cost of repair is being reduced. In other words, the fewer new spare parts in a machine (they increase production costs) and the more reconditioned ones, the higher the profits for motor vehicle repair people.

However, it is completely evident that it is not possible to recondition every part without harming quality. And the repair people find themselves confronted with a dilemma, to install a rebuilt part with less precision and to enjoy a profit or to install a new one and reduce profits? Most often, preference is given to the first alternative.

Of course, the reconditioning of parts should be encouraged in the future. However, to a certain limit. It is determined by the extent to which this procedure solves the primary task, the lengthening of the working life of the vehicles, their effective utilization after capital repairs.

It is understood that just profit alone, in this case, cannot serve as a reliable regulator. Complex "tuning" is needed along several parameters. But it is not within the power of experienced workers alone to develop these criteria. The assistance of industrial science is needed. We are being given assistance, in particular, by the State Scientific Research Institute for Motor Vehicle Transport of the RSFSR Ministry of Motor Vehicle Transport, by the Kazakh Scientific and Research and Planning and Technological Institute for Motor Vehicle Transportation and by numerous

departments of VUZ's. However, the volume of work is small. It is being carried out unsystematically and with a lack of coordination.

The growing rate of technical progress demands the implementation of widespread scientific research, not only in the motor vehicle industry, but also in the area of motor vehicle repair. And, inasmuch as no one is occupied with this in a centralized way, each department searches for solutions alone. For example, we are studying the question of creating a special design and technological subdivision within the Avtoremont association. As it is said, according to principle, although the science is scanty, it is our own. This subdivision will conduct research, master progressive technological processes and design nonstandardized equipment.

It appears that the USSR State Committee for Science and Technology will not leave this problem without attention. The State Scientific Research Institute for Motor Vehicle Transport of the Russian Federation Ministry of Motor Vehicle Transport could become the leading organization. Coordination of research will permit a more accurate determination of over-all problems and a concentration of efforts on their solution. And it means the development of complex programs for the introduction into practice of the latest developments of science and engineering and the planning and financing of scientific research by means of special-purpose procedures. The effectiveness of such a method has been proven by many branches of industry.

Improvement is needed in the supplying of motor vehicle repair production with material resources. As in the past, they are allocated according to norms. Why? Similar norms simply do not exist. Planning organs allocate materials for operational needs. Ministries and departments themselves have to divide them among operators and repair people. This is why part of the work, and a large part, has to be planned "out of air." And in those cases where there are funds, materials and spare parts often either do not come at all or arrive late, which illustrates the vitality of the opinion that repair production is secondary.

Clearly, USSR Gosplan should develop such norms. And should not do so slowly. The country's fleet of motor vehicles is increasing every year. And it is, indeed, well known that the effectiveness of the utilization of motor vehicle transport depends to a large degree upon how the "capital" works. So it is not logical that there are norms for the manufacturing of equipment, but are none for repair which restores engine life up to 80 percent and more.

It would be simpler to solve these problems by having a single master of motor vehicle repair production. In our view, it should be the Ministry of the Motor Vehicle Industry. Today, the organization of the repair of powerful units and complex systems for the control of a motor vehicle on a high industrial base is within only its power. For this it would be possible to transfer some of the repair plants to the motor vehicle industry.

But even with the current allocation of roles, the aid of the motor vehicle industry to repair workers can be more effective. I believe that producer plants should be responsible not only for the operation of their vehicles up to the first capital repair, but also for their over-all extended service life, that they should carry out an author's supervision over repair enterprises. There is some experience in this direction. Several years ago, the Minsk Motor Vehicle Plant and enterprises of the republic's Ministry of Motor Vehicle Transport concluded an agreement on scientific and technical collaboration.

However, on the whole, the motor vehicle industry is still insufficiently operationally attentive to the requests and desires of consumers and repair people. For example, long ago we asked the collective of the Yaroslavskiy production association, Avtodizel', to substantially improve the quality of its flywheel gear casing. More than 10 percent of the motor vehicles from the Minsk plant are standing idle within the republic's Ministry of Motor Vehicle Transport due to the partial breakage of this gear casing. The cylinder block of the ZIL-130 does not possess sufficient strength and rigidity, which demands additional expenditures for its restoration. Or let us take the technical documentation for repairs. Those who are involved in production should develop it more rationally. Currently, unfortunately, the majority of motor vehicle plants forget about this.

The intensification of contacts between those who manufacture vehicles and those who prolong their working life will permit a substantial increase in the quality of repairs and, therefore, a more complete satisfaction of the demands of the national economy for motor vehicle shipments.

Readers Respond

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 21 Feb 80 p 2

[Text] Letters to the editor suggest that the subject of capital and routine repairs to transport equipment concerns many of our readers. We received many responses to the article by N. Alferchik, deputy minister for motor vehicle transport of the Belorussian SSR, "How Vehicles are 'Treated'" ("Sotsialisticheskaya Industriya" 23 January, 1980). We publish several of these letters today.

Two Plants -- Two Approaches

It was gratifying to read in N. Alferchik's article what noticeable steps forward in the organization of the repair of motor vehicles have been taken in Belorussia. Unfortunately, this is not the case everywhere.

It is an entire story to repair, for example, the dump truck, KrAZ-256B, in Apsheronsk. One motor vehicle had been at the plant there for 8 and ½ months, two for a half year, and the one which was sent there on 2 October of last year has still not returned. And, after all, the time limit for the carrying out of capital repairs determined by an order of the RSFSR Ministry of Motor Vehicle Transport is much shorter, 22 days.

But not only does the excessive length of time for repairs rouse censure. In the practice of the work of the plant there is an unwritten rule. Drivers are invited supposedly to pick up vehicles, but, in actuality, for two-three weeks they drive the motor vehicles "to the mind," that is, they, in fact, repair them with their own hands. Then why in the world do we send the vehicles to the plant?

And then there is another motor vehicle repair plant in Nevinnomyssk about which we would like to say a good word. There, all our concerns over repair occupy one day. The centralized Nevinnomyssk workers drive home the already repaired vehicles and exchange them for those which we must turn over for repairs. The personal services were just like clockwork in the workshops! That is real service!

Two plants, two approaches to work, and completely opposite final results. Why is this possible within a single industry?

V. Nikiforov, director of a department of the Kineshemskiy Production Association for Freight Motor Vehicle Transport

Isn't it More Profitable with One's Own Forces?

Is is mandatory to make capital repairs to motor vehicles at a specialized plant?

At the outset of the development of the motor vehicle industry the question was not valid. There were both fewer vehicles, and vehicle bases were poorly equipped. And motor vehicles were repeatedly returned to the fleet only through motor vehicle repair plants. But, after all, the situation has changed. I think that now it makes sense for motor vehicle economic enterprises themselves to plan for the carrying out of capital repairs, at least the large enterprises. I can refer to my own experience (I worked since 1947 at a motor vehicle enterprise, first as a mechanic and then as chief engineer). With the presence of the necessary working capital of machine units as well as spare parts, a driver together with a single fitter-repair person will be able to carry out complete repairs and adjustments to a vehicle in a maximum of 10 days. This, in my view, is more profitable than to bring a vehicle to plants. Especially as they, as a rule, do not complete work in normative time limits, while the plan for shipments is not lifted from the vehicles. There are big complaints about the quality of repairs as well. Often a

vehicle is just delivered from a plant to its place of operation by tug, and the driver spends a half month eliminating flaws in workmanship.

The primary obstacle to conducting repairs at motor vehicle economic organizations is the absence of spare parts. How can this be? I see the way out of this situation by placing part of the volume of capital repairs on the shoulders of motor vehicle economic organizations. Then the freed capacities of the plants could be switched over to the production of certain spare parts which are in short supply.

A. Dubinin, engineer-mechanic

Firms are Indispensable

I cannot agree with those who are proposing the decentralization of repair. I think this will have a precisely negative effect on the success of this work. Hundreds of motor vehicle repair plants operating in our country are subordinate to various ministries and departments. Therefore, often in a certain republic or oblast there are several enterprises for the repair of one or another model of motor vehicle which are not connected with each other or with a producer plant. Many troubles in the carrying out of capital repairs are concealed in such dissociation.

Take even the supplying of spare parts. Plants which manufacture vehicles receive complex components in strict accordance with a monthly production program. But spare parts (that is, those very replenishing components) are delivered to us, repair people, however strangely... depending upon their presence on the base. It is as if a production program did not exist for us. This leads to the fact that motor vehicle repair plants need to organize their own production of components to carry out their assignments, spending much effort, time and equipment on this. I will give an example. We ordered four compression molds in order to provide vehicles with diffusers, stop signals and side lights. They came to 6,000 rubles, but were operated for only four days. We turned out enough components to last for an entire year. But were we in a single association, we simply could have utilized the services of another plant or, on the other hand, have manufactured diffusers ourselves for our associates.

The deputy minister for motor vehicle transportation of Belorussia is correct when he speaks about the necessity to combine motor vehicle repair enterprises. I believe that for the success of this work it is necessary to specialize plants in the repair of certain models of vehicles, to combine and transfer them to an appropriate motor vehicle plant which turns out a given model, that is, to create firms.

V. Minasyan, chief engineer of the Yerevan Motor Vehicle Repair Plant

If We Count on a Computer

It is possible to reduce the shortage of spare parts for motor vehicles to a large extent by restoring worn components, about which N. Alferchik is completely correct in his article, and by the centralization of reserve spare parts. Indeed, the number of motor vehicle enterprises is growing. We have more than 300,000 of just small-scale motor vehicle economic organizations. And each is striving to create its own, albeit small, supply of parts.

The way out, it seems to me, is to distribute and account for demands for spare parts in a centralized way with the aid of an electronic computer. Moreover, it is necessary to develop a special-purpose program based on forecasting the needs of motor vehicle economic organizations for spare parts for many years in advance, taking into account all the changing factors, composition and number of the motor vehicle fleet, service life of components, "age" of machines, etc. To implement such a program, extensive information is needed about the resources of products, the quantitative and qualitative distribution of motor vehicles throughout the regions of the country and throughout industries... In other words, it is necessary to create a huge inter-industry information bank.

It is not easy to develop such a program. But it is a necessary task. Even by approximate calculations, the effect throughout the country will come to approximately 500 million rubles a year.

Ye. Kuznetsov, doctor of technical sciences

P. Chervonobrodov, candidate of technical sciences

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MINISTER OF TRANSPORT CONSTRUCTION ANSWERS QUESTIONS ON BAM

Moscow IZVESTIYA in Russian 15 Mar 80 p 2

[Interview with USSR Minister of Transport Construction I. Sosnov by Yu. Grin'ko: "Trunk Line of the Century"]

[Text] USSR Minister of Transport Construction I. Sosnov answers IZVESTIYA readers' questions about progress in construction of the Baykal-Amur Trunk Line. IZVESTIYA letters to the editors testify to the great interest Soviet people have in the Baykal-Amur Trunk Line. What is this "construction project of the century"? What role does the BAM plan in developing the country's productive forces? What new technical resolutions are being given life during the course of its construction? These and other questions in letters from readers were the subject of a conversation between IZVESTIYA special correspondent Yu. Grin'ko and USSR Minister of Transport Construction I. Sosnov.

[Question] Ivan Dmitriyevich! Readers A. Makarov from Karaganda, V. Ponomareva from Volgograd and Ye. Kartashov from Minsk ask: "What is the national economic importance of the BAM?".

[Answer] The so-called BAM zone covers approximately a million square kilometers, or five percent of the Soviet Union. The trunk line passes through regions hardly utilized yet, regions in which enormous natural resources have been prospected. Without a railroad, industrial use of these resources would be impossible. The second and equally important purpose of the Baykal-Amur Trunk Line is transit shipments of freight by the shortest route from the European portion of the continent to Pacific Ocean regions and back. In view of all these factors, the CPSU Central Committee and USSR Council of Ministers have adopted a decree on construction of a new latitudinal railroad 3,110 kilometers long.

The BAM route passes through northern regions of Irkutskaya Oblast, Buryatskaya ASSR, Chitinskaya and Amurskaya oblasts and Khabarovskiy Kray. It connects existing lines from Tayshet to Ust'-Kut and from Komsomol'sk-on-

Amur to Sovetskaya Gavan' and opens a rail outlet from Tayshet to Pacific Ocean ports. Ties with Kamchatka, Sakhalin and other regions of the Far East will improve considerably when construction of the trunk line is complete.

[Question] What natural resources of Siberia will be drawn into economic circulation with the help of the trunk line? This question was contained in letters from R. Blagova (Kuybyshev), L. Shubina (Alma-Ata) and Yu. Marchenko (Belgorod).

[Answer] Speaking at the 17th Komsomol Congress, General Secretary of the CPSU Central Committee L. I. Brezhnev said: "The Baykal-Amur Trunk Line cuts through the age-old taiga to places where there are tremendous riches which must be placed at the service of the homeland. A large new industrial region will be created here; new cities and settlements will be raised."

In fact, geologists have discovered iron, manganese, tin, aluminum and tungsten ore, petroleum, fuel gases, arsenic, gold, mica, table salt, apatite, titanium, graphite and other minerals in the immediate vicinity of the new route. This list alone says much.

The importance of the construction project is not limited to laying the steel trunk line and is not exhausted by economic utilization of the adjacent zone. It also includes creation of a platform for marching on more remote and even more extensive regions. We are essentially creating a launching platform for construction in the future of a railroad into Central Yakutia and beyond, into the northeast.

[Question] The bulk of the trunk line will pass through permafrost regions and the western portion will pass through seismically dangerous zones. Readers want to know what new construction methods are being used under these conditions.

[Answer] Nature offers many "surprises" here. Steep slopes, undercut banks, rocky talus. Avalanches, rock slides, ice crusts and mari [shallow, hummocky bogs]. In the winter, temperatures often reach -60°. The route crosses seven mountain ranges -- Baykal'skiy, Severo-Muyskiy, Stanovoy, Turanskiy, Kadarskiy, Dusse-Alinskiy and Tukuringskiy -- and three of them will require the drilling of unique railroad tunnels. We are faced with "saddling" 16 large rivers. And we will need to erect more than 3,335 artificial structures on the BAM as a whole, 126 of which will be large bridges.

The main technical resolutions in the plans are progressive and economical. They correspond fully to modern rail transport requirements. Everything that is best from the arsenal of modern equipment and railroad operation organization in our country and abroad is being used on the BAM. We will use the most advanced methods of railroad operation, automated shipping control systems -- everything that will ensure efficient service to the industrial complexes of the BAM zone and provide maximum conveniences to future passengers on the new Baykal-Amur trains.

Continued shipping capacity growth will be ensured by an increase in freight train weight to 9,000 gross tons. How? First of all, by using eight-axle cars, by electrification, and by organizing paired trains on the eastern BAM sector.

As concerns the complex climatic, engineering and geological features of the construction region, all utilities components and production methods take them fully into account. Thus, in order to avoid deformation, the drainage portion of the earth bed is being made basically with rocky, fast-draining earth. We are using fundamentally new columnar foundation components for small and medium-sized bridges, driving them to a calculated depth in the permafrost.

The unusual construction conditions also require original resolutions, which the builders are finding. The 1,435-meter bridge crossing the Amur near Komsomol'sk-on-Amur is the pride of domestic bridge-building. The foundations for all the channel supports were laid in record time here -- and in rocky earth and a strong current! Many interesting technical innovations have found application here: driving tubular piles into rocky ground, underwater concreting, special reinforced concrete slabs with very fine tolerances for use as rail cross-ties. And there are many such examples.

[Question] Construction on such a scale requires a huge production base....

[Answer] Of course, and it is being created at accelerated rates. Already in operation on the BAM route are a number of complexes of construction industry enterprises. They include reinforced concrete components plants, plants to repair construction and road-building equipment, crushed stone plants, quarries, claydite production shops, shops to manufacture sanitary-engineering intermediate products and electrical wiring.

Construction work is characterized by a high level of mechanization. BAM workers have available to them thousands of excavators, bulldozers, various sizes of trucks and other modern equipment. Moreover, a large amount of special equipment required for building tunnels and bridges has been allocated -- drilling equipment, mobile power plants and compressors, machinery for laying, ballasting and finishing the upper structure of the railroad track. All this equipment is adapted for use under the harsh conditions of Siberia.

[Question] Readers are interested in what has been done on the BAM already. In particular, A. Vasil'yev (Riga), V. Kudryavtsev (Tomsk) and P. Rizayev (Samarkand) have written us about this.

[Answer] Installation of this great trunk line has been done in accordance with approved technical plans and using the capital investment and material-technical resources amounts allocated; annual plans have been overfulfilled.

Of the 3,110 total kilometers, work has been developed on a broad front on 2,000. Trains are operating full-time and temporarily on more than 1,100

kilometers. Upwards of 60 settlements have been put up. Much has been done to create normal housing and living conditions, labor organization, public catering, medical, cultural and personal services for construction workers.

For example, Tynda, which BAM workers rightly consider their capital, should be considered a model of large-scale construction. Nine-story, comfortable houses in practically no way inferior to those in Moscow are being built here. The same lay-out of one-, two- and three-room apartments, the same conveniences. The sponsorship of Muscovites has indisputably had a positive effect. Standards have been created which give full consideration to the opportunities and demands for today's standard of living.

Socialist competition has developed widely on the BAM. Thus, more than 8,000 people have won the honorary title of shock-worker of communist labor. It is with pride that I report to IZVESTIYA readers that 2,856 workers, 159 brigades and sectors and 19 organization collectives have already completed their 10th Five-Year Plan assignments.

[Question] In what way was 1979 a remarkable year for BAM construction workers and what are the tasks of the concluding year of the 10th Five-Year Plan, IZVESTIYA readers ask.

[Answer] This past year was the year in which the 220-km Tynda-Berkakit line was finally released for operation. Operators have available to them an excellent track with good production and service buildings. In other words, the Little BAM, from Bam Station to the Neryungrinskiy coal deposit, is now fully operational.

Much has also been done on the main BAM route. We laid 264 km of main track. We introduced 62 km of second track on the Tayshet-Lena line and 123 km was equipped with automatic blocking. The steel rails have already reached Severobaykal'sk and the sector from Urgal to Berezovka has been opened for temporary operation, that is, the Far Eastern Rail Ring has now been closed. The steel track has also been increased by more than 180 km on the western line out of Tynda.

The production program increases significantly in the Lenin anniversary year -- by 24.1 percent as compared with last year. We plan to put into permanent operation the line from Berezovka to Komsomol'sk, to begin temporary operation of the Khorogochi-Chil'chi sector, and open to temporary traffic the line from Chil'chi to Ust'-Nyukzhi. In a word, the time is not far off for a labor contest to begin for the right to connect the two halves of the symbolic key to the BAM, which right has been entrusted to representatives of the shock-work detachment imeni 17th Komsomol Congress on the Western and Central sectors.

As I have already said, the planned Baykal-Amur Trunk Line construction schedules are being held to. At the same time, this does not signify that everything is going smoothly. The installation and start-up of individual

projects is sometimes delayed by considerable interruptions in deliveries of building materials, components and equipment. Construction schedules for enterprises of the construction industry base and the mastering of planned technical-economic indicators are often considerably above normative. This then involves our getting materials and components from far away, which increases construction costs. The proper attention is not always paid to maintaining roads adjacent to the route, which leads to rapid wear on vehicles. Our ministry, the USSR Ministry of Installation and Special Construction, is faced with accelerating the implementation of top-priority measures on drilling and installing Severo-Muyskiy Tunnel. It is also important that bridges be built faster.

The problems which arise during the course of such a gigantic construction project as the BAM are diverse, but Soviet people have proven more than once that they are capable of the most complex tasks. The honored collective of BAM workers is fully resolved to complete installation of the Baykal-Amur Trunk Line within the time periods set by the CPSU Central Committee and USSR Council of Ministers.

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BAM PROGRESS REPORT SURVEYED

Moscow GUDOK in Russian 14 Feb 80 p 2

[Article by M. Romanov: "BAM: Construction Picks Up Steam"]

[Text] Upwards of 1,500 kilometers of steel rail on which trains are already traveling, 3,000 kilometers of temporary roads, more than 2,000 different artificial structures, including bridges and tunnels, 63 new settlements erected in the untraveled taiga.... That is what the BAM is today. It is already working for the country, hauling lumber and coal.

These impressive facts and figures were cited by USSR Deputy Minister for Transport Construction and Glavbamstroy chief K. Mokhortov in his speech at the traditional press conference for Soviet and foreign journalists which was organized by the press department of the USSR Ministry of Foreign Affairs in Moscow.

The tremendously long (3,145 km) route crosses very complex terrain in territory with unusually difficult climatic and geological conditions: high seismicity (up to 9 points), low temperatures (down to -62°). Two-thirds of the railroad passes through permafrost which reaches depths of 300 meters in individual sectors. Seven large mountain ranges and dozens of large and small rivers intersect the future trunk line.

In order to overcome all these obstacles, we must build a total of about 4,000 artificial structures and several tunnels totalling 34 km in length.

In a word, K. Mokhortov stressed, the Baykal-Amur Trunk Line has no analogs in history in terms of aggregate construction engineering-technical parameters. That is why the BAM is called the construction project of the century.

Installation of this unique route is an ancient dream of our people, and that dream is close to being realized. The zone through which the route passes is a very rich storehouse of minerals whose extraction will provide the country with a significant economic impact. The BAM will help us utilize as quickly as possible the natural wealth of Siberia and the Far East.

The BAM has been under construction for almost six years. One of the most complex problems, that of transport, has almost been completely resolved.

Only one 800-km segment in the Western sector remains unmastered. In 1980-1981, a temporary road will be put in here as well.

This year, rails will be laid from Severobaykal'sk to Angoy (120 km), from Tynda to Ust'-Nyukzhi (108 km) and 100 km east of Tynda. Builders await impatiently the moment of celebration when detachments making the Baykal'skiy Tunnel meet each other. This event is expected to occur in May. And the work tempo at the largest BAM tunnel, the Severomuyskiy, has picked up appreciably, thanks to the fact that power began arriving here several days ago from the Ust'-Ilimskaya GES. The first passenger trains will soon begin runs from Tynda to Kiev and from Tynda to Khar'kov.

But, as on any large project, there are also quite a few problems. And not just technical ones, but also social and personal-services ones. Incidentally, some of them are even gratifying. For example, no one anticipated the population increment that has occurred on the BAM: today, 40,000 children have already been born here, and day nurseries and kindergartens had been planned for only half that number.

Thus far, we have been able to meet only partially the demand among BAM workers for fruit, vegetables and dairy products. Construction of subsidiary farms is now being expanded on all sectors.

The construction site is picking up steam; the BAM zone is quickly being made more hospitable. Upwards of 200,000 people now live here, and six years ago the population of this region was less than 5,000.

The BAM is being built at an intensive rate. There has not been a year yet in which plans were not met, and that is a guarantee of successful resolution of all the tasks facing its builders.

K. Mokhortov answered numerous questions from representatives of the Soviet and foreign press, radio, television and information agencies.

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GEORGIAN REPUBLIC'S RAIL TRANSPORT PROBLEMS DISCUSSED

Tbilisi ZARYA VOSTOKA in Russian 18 Mar 80 p 2

[Article by G. Buachidze, chief of the transport division of the Scientific Research Institute for Economics and Planning attached to the Georgian SSR Gosplan, candidate of technical sciences, and winner of the Georgian SSR State Prize: "Waiting for the Car"]

[Text] The development of all sectors of the national economy, among other factors, rests on development of the different forms of main-line transport and improvement of its structure. In Georgia, freight transport by rail, taking anticipated fulfillment into account, will increase in 1980 to 99.5 million tons and freight turnover will increase to 14.1 billion ton-kilometers, compared with 82.3 million tons and 12.3 billion ton-kilometers, respectively, in 1975.

This attests to a good trend. Nevertheless, the average annual rates of development of rail transport are nearly twice as low as the rates of development of the republic's national economy as a whole.

It should be noted that a similar situation is also characteristic of many other union republics. Addressing the November (1979) Plenum of the CPSU Central Committee, Comrade L. I. Brezhnev, general secretary of the CPSU Central Committee and chairman of the Presidium of the USSR Supreme Soviet, stressed: "The transport situation must be changed for the better in the near future. But in order to resolve the transport problem efficiently, keeping the outlook in mind, this is not enough. A comprehensive, permanent program for the development of transport, which would absorb the best achievements of scientific and technical thought, needs to be worked out." The recently approved decree of the CPSU Central Committee "On measures for improving party and political work in rail transport" also is aimed at improving the work of rail transport.

As far back as 1974, with the cooperation of the Transcaucasian Railroad Administration, as well as various other organizations, dozens of facts on the impractical shipments by the republic's rail transport were

revealed to our institute. This concerned especially the shipments of freight for such industrial sectors as heavy industry, the food industry, light industry, and the construction materials industry. Estimates showed that eliminating just the cases of impractical shipments could give the state more than 3 million rubles in savings and release hundreds of standard eight-wheeled railway cars. From their use, in turn, an additional economic gain of 820,000 rubles could be obtained. Similar studies also were conducted in 1978. Again they revealed large losses of capital caused by impractical shipments, primarily short-range trips.

One of the reasons for this is concealed in the fact that consigners often select the form of transport entirely without justification, being influenced just by narrowly practical considerations. The cost of rail transport is the lowest. At the same time, the fact that short-range trips are highly unprofitable for the national economy as a whole is not taken into account: they draw off a large number of freight cars and require additional financial expenditures. And although at present regulations have been drawn up limiting the number of short-range shipments, their number increases from year to year on the railroad.

Another reason--and perhaps the principal one--for impractical shipments is lack of accuracy in planning the supply of enterprises and incorrect siting of plants themselves. As an example, a vast amount of molding sand is brought into our republic by rail. But is it impossible to approach solution of the problem from other positions--to set up a concentration mill in Georgia with a capacity of 120,000 tons of sand annually? All the prerequisites for construction of such a project exist: there are rich deposits of molding sand in Sachkherskiy Rayon. As a result, the opportunity to improve efficiency in the use of rolling stock will be developed. Specialists have come to such a conclusion in working out proposals to reduce transport costs. Their recommendations have been approved by an interdepartmental commission attached to the USSR Gosplan.

The same recommendations were drawn up with regard to construction of a reinforced concrete support structures plant for manganese and coal mines in the republic. Calculations convince us that implementing these proposals will make it possible to reduce transport costs by 359,000 and 571,500 rubles, respectively, and to obtain economic gains of more than 800,000 rubles for the country's railroad network as a whole. However, there is no firm assurance at present that the projects cited will be included in the capital construction plan for the 11th Five-Year Plan.

In many respects, reduction of transport costs depends on efficient use of freight cars, or, in other words, on shortening the duration of all freight operations, and especially the above-norm layovers of cars. Meanwhile, work in this direction is being conducted poorly in the republic. It is sufficient to say that in 1977 alone, the fines for excessive layovers of cars reached 1.4 million rubles. In the following 2 years,

the amounts were not very comforting, either. According to data of the transport and communications division of the Georgian SSR Committee of People's Control, 232,800 cars were held over on 574 spurs in 1978 and the first quarter of 1979. The loss from this exceeded 1.6 million rubles just in 1978.

As we see, we failed to transport additional thousands of tons of national economic freight just because of above-norm layovers of cars in the republic. Administrators of the appropriate ministries and departments should direct their attention to the experience of collectives of industrial and transport enterprises in Chelyabinskaya Oblast, Belorussia. The Belorussian SSR Committee of People's Control proposed that a special system of communications between railway stations and enterprises be put into practice; this has made it possible to link the interests of transport and industry in a unified whole without new capital expenditures.

Coordination of rail transport operation, we are convinced by practice, is in many respects disrupted by the careless schedule for taking freight out of the stations. Complaints in this case can be directed to a number of enterprises and organizations which are avoiding the dispatch of freight belonging to them. As a matter of fact, complaints are being referred to them, although the state of affairs is not changing for the better because of this. Other measures are necessary here, apparently. Special railroad and motor transport groups, let us say, could be set up on an equal footing at railway stations. Such groups could not only organize coordination of the shipment of freight that has accumulated, but also apply strict sanctions with regard to those organizations which are to blame for letting it lie around the stations.

In resolving the problem of the efficient use of rail transport, it is important to be concerned about extending railway trunk lines. Steps already have been taken in this direction. As an example, construction of the railroad section from Marabda to Akhalkalaki, which is 163 kilometers long, is beginning. The line will be put into operation in sections, which will provide the opportunity to improve indicators for freight and freight turnover in the next few years.

Construction of the Caucasus Transshipment Railroad also is opening up broad prospects.

Improvement of the work of transport, primarily rail transport, is an urgent, pressing problem. It is important to provide a specific, comprehensive approach to its solution and to raise the motivation and responsibility of many ministries, departments and organizations in this important matter.

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EDITORIAL CITES PROBLEMS OF GEORGIAN RAILROAD SYSTEM

Tbilisi ZARYA VOSTOKA in Russian 25 Mar 80 p 1

[Text] An important role is given to rail transport workers in actualizing the taut plans and higher socialist obligations of the republic in the concluding year of the five-year plan. They are faced with a large volume of shipment of national economic freight and, in so doing, with making a large contribution to gaining new frontiers of economic development in the republic. These are complex tasks and their resolution will require mobilizing efforts in the primary directions, precise analysis of the state of affairs and of specific, effective steps to eliminate shortcomings.

At the November (1979) CPSU Central Committee Plenum, Comrade L. I. Brezhnev criticized the work of railroaders and pointed out the necessity of resolutely eradicating shortcomings and using more fully reserves for accelerating the delivery of national economic freight to addressees.

These instructions apply fully to railroad workers of our republic as well.

The comprehensive indicator of transport operation is rolling stock turnaround time. Improvement in this indicator depends directly on how precisely the processes of moving rail cars and performing freight operations on them are organized, on the time involved in these operations. Very serious attention is being paid to questions of promptly freeing rail cars for other work on the access tracks of many republic industrial enterprises and organizations, and in particular at the Tbilisi Machine Tool Building production association. After receiving information well in advance that freight is approaching, they quickly pull up equipment and concentrate people. However, this style of work has not been instituted everywhere. We still have enterprises and organizations in which questions of freeing rail cars for other work have been of secondary importance. It is precisely this which explains the fact that throughout this past year, we managed to reduce rail car idle time during freight-handling operations by an average of only 0.2 hours.

The task collectives of all republic rail enterprises must set themselves is that of accelerating rolling stock turnaround time. And they are entitled in this work to count on more effective assistance from freight

shippers and recipients. There has thus far been no precise interaction here. The access tracks of the Zestafonskiy Ferroalloys Plant have been transformed into a unique "settling tank" for rail cars; the Rustava Chemical Plant, Kutaisi Motor Vehicles Plant and many others have paid large fines for above-normative rail car idle time.

In 1979, as compared with 1978, republic railroad workers succeeded in reducing average daily remaining cars not unloaded. But in January-February of this year, hundreds of cars remained unloaded each day in the republic.

The accumulation of large amounts of unshipped freight at the stations is also causing serious difficulties in railroad operation. At Dranda, Lanchkhuti, Tskhakaya, Tbilisi (freight), Tbilisi (junction) and a number of other railroad stations, unloading is sometimes delayed because individual recipients do not take effective measures to pick up promptly incoming freight addressed to them.

There are many reasons for this, but one of the primary ones is that the leaders of many enterprises and organizations do not ensure around-the-clock unloading of incoming cars: night unloading in the republic does not exceed 16 percent of the daily assignment. Such disproportion, which evolved as a result of poor attention on the part of leaders of a number of enterprises and organizations to ensuring night unloading and unloading on Saturdays and Sundays, leads to interruptions in the rhythm of the rail conveyor. And that in turn has a substantial influence on the work rhythm of dozens of republic enterprises and organizations.

The indifference of individual freight recipients and shippers towards solving the problems of promptly unloading cars and performing all freight operations smoothly can be explained by the fact that it is possible for them to cover their own inefficiency through fines from the state pocket.

Use of the leading experience of the best collectives of the country's railroad network is an important reserve for accelerating rolling stock turnaround time. Serious attention has been paid to this question on the Transcaucasus Trunk Line, but not all collectives have fully realized yet the necessity of using the railroad's resources effectively by using progressive shipping technology. We need to arm ourselves more energetically with the experience of Muscovites in quickly processing long, heavy trains, with the experience of Leningrad and Odessa transport workers, who have set up precise interaction among railroad workers, motor vehicle drivers and river transport workers, with the experience of Chelyabinsk workers, who have achieved a high yield on capital.

Party organizations of several cities and rayons in our republic have also accumulated quite a bit of valuable, useful experience in coordinating the operation of rail transport and economic organizations. Every local party and soviet organ must set itself the goal of studying and disseminating everywhere the leading work experience of transport commissions attached to the Leninskiy raykom of the Georgian Communist Party (Tbilisi) and the Poti and Batumi gorkoms, for example.

In resolving the range of tasks put forward in the CPSU Central Committee Decree "On Steps to Improve Party-Political Work in Rail Transport," it is now very important that everything possible be done to strengthen discipline in the collectives of republic transport workers. We must be governed in this work by the resolutions of the January meeting of the Georgian party aktiv. The steps taken to do this must foremost be aimed at ensuring train safety of movement, at creating in the collectives an atmosphere of mutual exactingness and mutual supervision.

Republic workers, inspired by the homeland's high award of the challenge Red Banner of the CPSU Central Committee, USSR Council of Ministers, AUCCTU and Komsomol Central Committee, are doing everything possible to meet with honor the high obligations of the concluding year of the five-year plan, to greet in worthy fashion the 110th anniversary of the birth of V. I. Lenin. Improving the work of railroad workers, strengthening discipline and improving organization in all links of the transport conveyor will serve as a reliable guarantee of improvement in the results of other republic branches of the national economy and will help meet successfully the tasks set by the 25th CPSU Congress and the 25th Congress of the Georgian Communist Party.

11052
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IMPROVEMENTS AT IVANO-FR KOVSK LOCOMOTIVE REPAIR PLANT

Plant Description

Moscow GUDOK in Russian 6 Dec 79 p 2

[Article by S. Parkhomenko and V. Chistov, special GUDOK correspondents: "The Production Structure is New, but the Base is Old"]

[Text] The Ivano-Frankovsk Locomotive Plant was one of the last of the Mohicans among enterprises at which steam locomotives were refurbished. But that was yesterday. In February of this year they held a solemn ceremony to say farewell to the last steam locomotive going out onto the line. The enterprise has totally altered its production structure and has made the shift to new production. By the end of the year 250 diesel switching locomotives of the TGM3 series will be refurbished here.

Well, they were getting ready to set up for new production in Ivano-Frankovsk as early as the beginning of the five-year plan while they were manufacturing equipment accessories for diesel locomotives side by side with the repair of steam locomotives.

"However, if one is really to be absolutely frank, we refurbished the first 'TGM's' on enthusiasm alone," said I. A. Chernyy, chief of the plant. "There were neither enough of the necessary accessories nor the inspection and testing stands for normal operations. But the diesels and the hydraulic drives were coming to us as part of a cooperative from Daugavpils and Saransk."

"But, as they say, the first step is the hardest! As early as last year the people of Ivano-Frankovsk mastered the repairs of hydraulic drives, having installed over a brief period of time equipment which their Latvian colleagues had handed over to them. But in June of the current year they launched operations as well in their own diesel shop, in which they have been increasing the output of units from month to month. The position-flow method of refurbishing diesel locomotives has been successfully and smoothly gotten underway and there is no doubt in the collective that the stepped-up plan for the current year will be realized."

"But it would be premature to assert that all the difficulties connected with setting up new production remain behind us. Rather, they are, on the contrary, becoming ever more aggravated and are making themselves known as the program for repairs increases," L. S. Shishkovich, chief technologist, says, continuing the discussion.

And that is really how it is. Let us drop in, for instance, at the former depot for the servicing of steam locomotives. One of the pits here has been set aside for fitting out diesel locomotives arriving at the plant. But, as you know, a system of special catching devices and capacities for the collection of waste oil and diesel fuel must be installed and built here for this purpose. Finally, one must equip the pit with steaming, blowing systems and equipment all around it for heating up the locomotive during winter months. But the small production areas of the depot's building do not permit one to do all this as proposed. Especially as right next door, in the neighboring compartment, they paint the diesel locomotives after repairs, but they paint them by hand. And owing to the lack of a drying chamber, the locomotive stands idle 16 to 18 hours, instead of 2 to 3 hours, after painting.

One can only hail the fact that the collective, instead of waiting around for the modernization of the enterprise, set about the repair of diesel locomotives and successfully mastered it, especially as each diesel locomotive is taken into account today. But, as you know, an enterprise cannot live only for today. The time has come to think some about the long-term as well. And they realize full well both at the enterprise and in the ministry that there is no possibility of moving further ahead without radical modernization of the enterprise.

The problem of the shortage of production is for today, I think, the most burning and acute. The entire misfortune lies in the fact that the territory of the plant, which has been extended like a narrow ribbon for over a good kilometer, is squeezed on two sides by the yards and by the turn-around locomotive depot. How can this be? Both the project planners—for the staff members of the Ukrproyektstal'konstruktsiya [Ukrainian Central Scientific Research and Planning Institute of Assembled Steel Structures for Construction] took it upon themselves to draft a plan for modernization—and the specialists of the plant's main administration have reached a single opinion: it is not economically expedient to carry out a fundamental retooling of the enterprise in the existing areas. It is necessary to tear down all the old shops right to their foundations. But there is a way out of this.

The turn-around depot, workshops of the railroad's locomotive service and the point for equipping railroad passenger cars are situated on the territory adjoining the plant. The total area of all the areas built up with structures is 4.3 hectares, which is just half the plant's area. But if the employees of the plant turn out production worth 9.5 million rubles a year, then their neighbors turn out production worth only a total of 240,000 rubles. The plant's collective could utilize this territory with greater efficiency. The builders would erect a modern new diesel locomotive wing here. Then it would

be advisable to adapt the old steam-locomotive shops for ancillary production. All the problems connected with the modernization of production would fall away of themselves. Basic retooling would enable one to increase the output of diesel locomotives from repairs to 660 units.

The question of the expansion of the plant's territory arose for the first time as early as 20 years ago, when they transferred the Ivano-Frankovsk Locomotive Depot to the category of a turn-around facility. In principle they do not object either in the administration of the railroad or in the main locomotive administration of the Ministry of Railways to handing over the territory to the plant under the condition that the depot would receive other territory in return. And a place was found. It is 4 kilometers from Ivano-Frankovsk, at the Khryplin station. And it was here that it was decided to erect areas built up with locomotive structures. But it was only decided in words, and a word, as they say, cannot be sewn to the deed. It has already been four years now that correspondence has been underway between the plant and the railroad and between the plant's main administration and the main locomotive administration on to whom to entrust the project planning and construction of the new objects at the Khryplin station. And consequently, the question also of the modernization of the locomotive repair enterprise has been drawn out for an indefinite period of time, although the necessary funds--36 million rubles--have already been allocated for this purpose and the planning organization which will be engaged in the retooling has already been determined. It turns out that it will begin no earlier than 1983.

And how then is the collective to fulfill the state plan for the repair of diesel locomotives, a plan which is increasing from year to year? Apparently, without waiting for modernization, it is by now necessary, with the help of the main administration, to "unravel" the "bottlenecks" in production, of which there are no small number. There is no galvanic section at the plant, the foundry is in a disastrous condition, and the drafting of the technical specifications for electric machine production has been dragged out. The reinforcement of the instrument facilities, which are huddled into a section covering 180 square meters, is required without delay.

The collective of the Ivano-Frankovsk Plant, besides the repair of diesel locomotives, manufactures many spare parts of every sort in small-scale series, while a total of 10 to 20 items may be turned out for the month in terms of some positions.

"But it is necessary to earmark quite a bit of the production areas for them," I. A. Chernyy says. "More than once we have raised the question before the main administration of removing a portion of the spare parts from our plan, in particular, water posts and the crankshafts to stokers. We would set up a galvanic section in the production areas that had been relieved of this. And instead of reducing it, they would, or the contrary, increase our plan for spare parts."

In a word, the collective of the Ivano-Frankovsk plant is now, as never before, especially in need of help from the main administration. The enterprise

has altered its production structure, but the production base remains the old one, which does not meet today's requirements.

Editorial Comment

Moscow GUDOK in Russian 9 April 80 p 2

[Editorial: "The Plant Starts Its Modernization"]

[Text] "The Production Structure is New, but the Base is Old"—such was the name of the correspondence published in GUDOK on 6 December of last year. It told about the fact that the repair of diesel locomotives had been successfully set up at the Ivano-Frankovsk Plant in the former steam-locomotive shops. However, the conditions under which the diesel locomotives are being refurbished are not in keeping with today's requirements. The management of the plant has more than once raised the question before the ministry of the basic retooling of production, but its solution has been postponed for an indefinite period of time.

As Comrade Sosnin, deputy minister of railways, has reported in a response that has come in to the editors, the expansion of the Ivano-Frankovsk Locomotive Repair Plant is being envisaged in the draft of the plan for capital investments for 1981-1985.

The necessary funds have been allocated for the current year for the drafting of the technical and economic substantiation for the modernization of the enterprise, which will define the terms for the retooling of existing production and the siting of a number of shops and sections, including a foundry, in new production areas. The questions of the utilization of the production areas adjacent to the territory of the enterprise, but located under the jurisdiction of other services, will also be settled during the process of drafting the technical and economic substantiation.

At the present time, for the sake of creating the necessary prerequisites for the refurbishing of diesel locomotives, a plan for the department for the repair of electric machines, for the galvanic section, for the expansion of the testing station and for the diesel locomotive assembly shop is being drafted in the PKTB [Planning Design and Technological Bureau] of the Main Administration for the Repair of Rolling Stock and Production of Spare Parts. It is planned to build them with the work forces of the plant's collective and by a method of operations using the plant's own resources prior to beginning the modernization of the enterprise.

An increase in the plant's capacities will permit one not only to increase the output of diesel locomotives from repairs, but also to improve substantially the working conditions and everyday life of the plant's workers.

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WATER FILTRATION SYSTEMS FOR RR STATIONS, SETTLEMENTS

Moscow GUDOK in Russian 5 Apr 80 p 2

[Article by Professor and Doctor of Technical Sciences V. Dikarevskiy, head of the "Water Supply and Sewage Systems" department at LIIZhT (Leningrad Institute of Rail Transport Engineers imeni Academician V. N. Obraztsov), and Candidate of Technical Sciences Ye. Petrov, branch scientific laboratory leader: "To Have Clean Water"]

[Text] On a number of railroads, they still have so-called brought-in water supply. Water is delivered to some stations and sidings in tank cars and poured into cisterns. This type of water-supply system in no way meets modern requirements, of course.

In order to eliminate brought-in water supply, local subsurface sources must be used. But water from them is not suitable for use without special treatment, in many instances. The methods of water desalination and deferrization used in large cities and manufacturing facilities are poorly suited to railroad stations and settlements. There, we need small installations which are easy to service. So specialists from the All-Union Scientific Research Institute of Rail Transport and our branch scientific research laboratory attached to the LIIZhT, after comprehensively studying domestic and foreign experience, have developed new designs for installations to make water potable.

Jointly with workers from a number of scientific research organizations, we have manufactured and are testing a prototype industrial installation, the UG-VITAK. It uses hollow fibers to demineralize water. The installation is already in experimental use at Ust'-Zigan Station, Kuybyshevskaya Railroad.

Parallel work has been done to develop a demineralization installation with flat filter membranes. The device will be installed at Yambakhta Station, Kuybyshevskaya Railroad.

Comparison of the two types of installation will enable us to choose the better one for extensive use in rail transport.

New methods of deferrization are also being developed. More than 50 small water deferrization installations of new design have already been introduced at nonconcentralized water-supply points. The economic impact from one such installation is up to 7,000 rubles per year.

The compact, contact-clarifiers installations developed in our branch laboratory to treat water from open reservoirs are in widespread use on the railroads. The economic impact of their introduction has already exceeded two million rubles. The time involved in building and putting treatment plants into operation has been reduced considerably.

Treatment plants usually use a common filtering material, quartz sand from the Volgograd Quarry. In order to avoid shipping sand to the ends of the earth, the department researched and is recommending for introduction local filtering materials such as "shungesite" from the northwestern regions and granodiorite for the Far East. Now under investigation are a copper-nickel slag, magnesite and activated charcoal.

A plastic pressure settling tank developed in the branch laboratory has now found practical application. Tests at two treatment plants of the L'vovskaya and Privolzhskaya Railroads have confirmed the effectiveness of using it to treat turbid water. The economic impact of introducing this settler just at one station, Khodorov, L'vovskaya Railroad, has been about 80,000 rubles per year.

Our department is now researching efficient methods of treating and purifying natural and waste water at the construction project of the century, the BAM. This work has essentially just begun, but preliminary physical investigation of treatment and pump stations put into operation on the BAM has already been done and the first practical recommendations on their operation have been issued.

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UNPAID FINES FOR UNDERLOADING REFRIGERATOR CARS

Moscow GUDOK in Russian 21 Mar 80 p 2

[Article by R. Ivakin: "Invisible Fines"]

[Text] Fines for underloading when shipping by rail were instituted in 1968. Since that time, these fines have been levied regularly. And although losses due to inadequate use of rail car load capacity are still high, this loss has been recompensed in part by the state by substantial payments to the state budget. However, the situation is entirely unique with regard to refrigerator cars, for which practically no underloading fines have been levied.

Asked why this is, rail financial services workers generally try, at first, to deny the fact altogether: fines are not subdivided by type of car, so fines for refrigerator cars are just not seen, they say. Then they say that fines for refrigerator cars are so small and petty that they do not deserve special attention.

Let's try to determine just how "petty" these fines are on a network scale. As was already stated, there are no documented data on this, but train and section brigades contend that underloading refrigerator cars is a usual occurrence and varies from one to 10 or more tons per car. There are also documented cases of cars being shipped out completely empty, according to freight documents, but naturally being paid for by the client as if filled normally. If refrigerator car underloading is assumed to be three tons per car per year, that means a total of more than 1.5 million tons of output not delivered to store shelves and 17 million rubles not recovered from shippers for 57,000 cars worth of lost freight resources. That is approximately how much all our railroads need to meet the "perishables" shipment plan for an entire month.

Such is the unrecorded "petty" sum, approximately.

But it is not just a question of that. When he signs the road statement and then the reporting card or 10-day station report, the shipper in many instances does not record the weight he shipped and which will be received

by the consignee, but the weight corresponding to the technical loading norm or the full capacity of the car. That is how reporting data is falsified. The opportunity for such records distortion is created due to the failure of the commodity-transport invoice -- the document for the freight recipient -- to conform to the road statement -- the document for the road and statistical accounting. These paths do not intersect anywhere.

The leaders of trade enterprises of the main Ministry of Railroads clients in terms of refrigerator-car shipments are so convinced of the normalcy of underloading that they have "legitimated" them in a peculiar way in the methods literature on trade profitability. The questions of fines is ignored and it is pointed out without any reservations whatsoever that payment for carload shipments does not depend on the weight of the freight being shipped in the car.

True, underloading is not called "petty" in the main freight administration. They understand the importance of the thrifty use of refrigerator cars. But they have yet to find anything better than again obligating chiefs of refrigerator trains and sections to strictly and definitely demand that shippers load cars and report underloading to station chiefs. It is as if they had forgotten that these obligations have long been duties of the individuals mentioned and that no one has rescinded them. Underloading is most often obvious to station workers even without reweighing: if a third or half the car is empty, all it takes is the desire to draw up papers for a fine. But the desire is not there.

It is clear to everyone that shippers can be influenced not by just the insistence of a train or section chief that cars be fully loaded, but by the refusal of stations to accept cars for shipment or by levying fines. However, shippers have learned that such an outcome is extremely rare. Refusal to accept a single refrigerator car for shipment and with it the other three, nine, 17 or 19 cars (depending on if it is a train or a section) which cannot be cut off from the "guilty" car means first of all disproportionate losses of rail car time, as does a resolute demand that cars be fully loaded. And that means actual monetary losses to the station. If a shipper threatened with a fine finds the tons lacking to fully load a car but delays in doing so, it is not the station's profit that increases, but its loss.

But if a shipper refuses to fully load a car, the station must itself determine the actual weight of the freight in order to levy a fine. And it must do so not on the basis of shipping documents or even on the basis of the commodity-transport invoice, for that document can, under certain conditions, be written out separately, once for the recipient and once for station verification. It can take a long time to take cars to the scales and back. Then the documents must be rewritten. And again time is lost, meaning losses and more losses.... And that doesn't even include such "petty" things as lowering static-load indicators.

As we see, given the current situation, in the "easy" attitude towards loading refrigerator cars, the interests of the station (and road) close ranks with the immediate, but in no way state-oriented, interests of shippers. It was for precisely this reason that fines for underloading "cold" cars have not been levied.

At the same time, there is a way out. Article 39 of the Railroad Regulations obligates freight shippers to be materially responsible for disagreement between actual weight and the weight indicated in the shipping document. In calculations between shipper and recipient, payment documents indicating the precise weight of the freight shipped are submitted to the bank. With the concurrence of the USSR Gosbank, the Ministry of Railroads can institute procedures for approving these documents at shipment stations or consignment stations prior to their submission to the bank. During such approval procedures, the difference between actual freight weight and the weight indicated in shipment documents must immediately be subjected to a fine and the party falsifying the documents punished. Instances of differences between tonnage in documents will disappear in very short order. If loading is not up to the technical norm and there is no difference in the documents, that is, when the shipper is not concealing the true situation, the above-mentioned approval procedure will serve to set the amount of the fine. The irreversibility of economic sanctions will quickly reduce underloading to a minimum. And if the destination station has an opportunity to obtain commodity-transport invoices prior to unloading and measure the amount of freight, the problem of fines for filling cars incompletely will be solved.

In all cases, train and section brigades must perform their monitoring functions, of course; they must demand a full load from the client and, when necessary, inform the levels of authority specified in their orders about underloading.

Finally, about the rate of fines for shipment by rail car. When that rate was introduced and its amount set, the amounts of "perishable" shipment were considerably lower. This could explain the failure of the rate to be proportionate to the prices of the cars themselves, as well as the freight. For example, is it logical to equate underloading firewood with underloading meat or grapes? But today, according to average estimates, the fine for underloading a ton of industrial output exceeds the cost of shipping a ton of that same output three-fold, but for "perishables," the fine only equals the shipping tariff. At the same time, "perishables" are 10- to 15-fold more expensive than industrial freight. But the most important thing is that a refrigerator is approximately 10 times as expensive as a boxcar or a gondola car.

The problems of operating refrigerator rolling stock force us to seek nonstandard and economically substantiated methods of solving them. "Force" methods will not bring results here.

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BRIEFS

BAM RAILWAY STATIONS--Construction of the Urgal and Alonka railway stations began today on the BAM railway. [Vladivostok Maritime Service in Russian to the Pacific Far East 0710 GMT 26 Apr 80]

CSO: 1829

SCIENTIFIC RESEARCH SHIP RETURNS FROM ANTARCTIC

Moscow SEL'SKAYA ZHIZN' in Russian 13 Apr 80 p 4

[Article by A. Urvantsev: "At the Ice Continent"]

[Text] The Antarctic!...it is difficult to utter this word without accompanying it with epithets. A gigantic reservoir of clean drinking water, and an enormous and still little studied treasure house of natural resources. The Antarctic is a continent which is larger than that of Australia....And, finally, the South Pole is the place with the severest climate on our planet.

The sixth continent was discovered by our compatriots Bellinsgausen and Lazarev in the 1820s. Researchers and seafarers from many countries streamed into it. To date our scientists have covered many thousands of kilometers on the ice sheet of the still mysterious Antarctic. Recently the scientific research ship "Academician Knipovich" returned from its icy shores; on board were scientists from the All-Union Scientific Research Institute of Maritime Fishing and Oceanography (VINRO). The purpose of the expedition was an overall study of the maritime fauna of Antarctica.

"Every meeting with Antarctica is unforgettable," says Aleksey Georgiyevich Naumov, a participant in the expedition, sharing his impressions with us. "This continent astonishes and overwhelms a person with its natural power, its fierce unstable weather. Everything on the sixth continent is unusual. For example, the sun moves along the horizon not clockwise, but counter clockwise. During the summer it moves from horizon to horizon and, without descending, again sets off on a circle. The warmest time of the year is in January, and August is the zenith of the winter. And also: The emperor penguins, the ancient inhabitants of the continent, bear their chicks not during the summer, but during the winter -- at a time of the fiercest cold, storms, and hurricanes."

At one time oceanographic ships performed their observations far from the shores of Antarctica. Now the ships perform research on the floating sea ices which belt the continent. And a magnificent picture appears

before the gaze of the researchers. Far away high mountains with snowy summits stretch for hundreds of kilometers along the icy desert. And toward the ships move blue-shadowed bright white icebergs glistening in the sun. Their above-water surfaces have been smoothed by the waves. And there is an endless number of these marble sculptures. The sun here is a rare guest. The sky is suddenly covered by clouds, a wet snow falls, and a hurricane-force wind blows over the surface.

"At definite intervals of time," A. Naumov says, "we would make stops. First we did some trawling, and then the ship would settle into a drift. After the trawl had been raised specialists would begin to sort out and study the catch. Each trawl presents the scientists with fragments of the life of the sea fauna which in Antarctica is much richer than the earth fauna. There are two types of trawling -- bottom trawling and water trawling. The latter brings in sparkling anchovies, ice fish, squid, and octopus. Bottom trawling is even more interesting. Sea stars, sea urchins, and transparent glassy sponges which look like tall goblets often get into the net....You can also find soft corals and sea worms....

"There have also been surprising meetings," the scientist recalls. "Once we pulled out a trawl and in it was a shark....It is very rare for predators to go into such cold latitudes. Icthyologists are carefully studying the way of life of the underwater inhabitants, their habits, migration routes, and their fishing areas. For a fish, as a rule, lives where there is feed. The fish's most popular dish is plankton -- tiny vegetable or animal sea organisms which multiply very rapidly. Shoals of fish will always graze at places where there are accumulations of plankton.

"Our plankton specialists were equipped with special nets, trawls, and microscopes. Once a notateniya -- a seabottom fish -- got into the net. Apparently, it had such a strong desire to enjoy some plankton that it abandoned its native waters and rose to the surface of the sea.

"Krill -- large plankton sea crayfish -- are giving rise to a special interest among scientists. They form accumulations on the sea surface in the form of huge brown-red spots."

"VINRO together with other scientific research institutes of agriculture," Vladimir Vladimirovich Shevtsov, a senior scientific associate, relates, "has conducted biological tests with swine and chickens of the feed value of krill meal with different fat contents. Three experimental models of fat krill meal which had been prepared on and brought back by the "Academician Knipovich" were used. The experiment showed that with young

chickens who received krill meal as a feed additive all of the zootechnical indicators were better than with those on ordinary feed. Thus, the survival of the poultry was 3.5 percent higher, the weight 1.8 percent higher, and the average daily weight additions 1.9 percent higher, while the feed expenditures were 5.4 percent lower than in the control group. And more: at 180 days of age the hens from the experimental group laid 14 to 34 percent more eggs than the hens which had received ordinary combined feeds."

Five different models of krill meal were tested at the institute's experimental swine section. It turned out that the new feed made of all five groups was biologically valuable and had a good influence on the productivity and development of the livestock.

Krill is an additonal protein resource for mankind. The fish industry has already mastered the production of krill meat, krill salads, and canned krill.

Sea geologists have "sounded" the ocean bottom, which was sometimes separated from the "Academician Knipovich" by many kilometers of water. Special equipment was lowered from the ship with the help of deep-water winches. Models of the bottom soil have been studied by them and geochemists. With a knowledge of the laws of distribution of chemical elements in the earth's core it is possible to quite accurately determine the chemical composition of ocean bottom substances.

In a word, the storming of the puzzling continent is continuing.

2959
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FULFILLMENT OF STEAMSHIP COMPANY PLANS FOR FIRST QUARTER OF 1980

Moscow VODNYY TRANSPORT in Russian 10 Apr 80 p 2

[Unattributed article: "Assuring a Precise Rhythm"]

[Text] Many collectives in maritime transport got a good start on their work from the first days of the new year. This observation applies primarily to the GKhO [State Economic Association] "Yuzhflot" and to all the steamship lines of the association, who have filled and overfilled the first-quarter plans, and to most of the steamship lines of the GKhO "Sevzapflot" and the Primorskiy steamship line. In March the collectives of the Murmansk, Kamchatka, and Sakhalin steamship lines were able to catch up and fulfill the first-quarter plans. The Far East steamship line faced a more complicated situation. In March, however, this collective, with the help of the GKhO "Dal'flot" overfulfilled the plan for foreign shipments and reduced the lag time considerably. Over the whole ministry, the plan for coastal shipping was filled by 113.3 percent in March, and the plan for foreign shipping reached 105.9 percent.

The successful fulfillment of the plans for the last month of the first quarter was helped greatly by the above-plan showing in the Caspian and other basins with oil-tanker and other cargo for the coastal trade, the favorable weather conditions on the Danube, the release of additional ships for foreign shipments by several lines due to a reduction in the waiting time for repairs, and an increase in the operational efficiency of the oil-tanker fleet by the Novorossiysk, Latvian, Georgian, and Primorskoye steamship lines. The sailors on the Baltic and Black seas had to do much strenuous work to fulfill the March and first-quarter shipping plans, but they were able to cope with the task.

In March, consignees received more than 400,000 tons of cargo in containers and more than a million tons in packages. The passenger fleet carried 2.5 million passengers on all kinds of trips, and about 1.5 million of them sailed in the Black Sea basin.

According to the operational results, the first-quarter plan was fulfilled by 107.5 percent for coastal trade and 103.9 percent for foreign navigation.

Fulfillment of First-Quarter Plans (Percent)

Steamships and GKhO	Coastal Cargo	Foreign Cargo
Northern	203.6	102.1
Murmansk	107.1	106.7
Baltic	--	100.6
Estonian	121.1	104.7
Latvian	107.3	104.3
Lithuanian	--	106.7
Results of GKhO Sevzapflot	120.3	103.0
Danube	105.5	110.9
Azov	104.8	104.6
Black Sea	115.3	100.4
Novorossiysk	102.3	108.3
Georgian	104.6	108.0
Caspian	111.4	158.7
Results of GKhO Yuzhflot	109.6	105.3
Dal'nevostochnoye	103.4	96.2
Kamchatka	100.4	100.9
Sakhalin	102.1	103.1
Primorskoye	100.3	145.5
Results of GKhO Dal'flot	101.5	101.3

The Central-Asiatic Steamship Line fulfilled its first-quarter plan by 103.4 percent in tonnage and by 97.2 percent in ton-miles. This line carried 102.8 percent of the coastal cargo and 105.1 percent of the foreign cargo.

The dock workers fulfilled 104.2 percent of the first quarter plan for loading and unloading operations. In comparison with the corresponding period last year, the volume of this work rose by 16 percent.

In spite of the generally good results, there were serious flaws in the work of several lines and ports. Delays occurred in the shipment of foreign cargoes. A smooth work flow continued to be lacking from the Black Sea, Far East, and Georgian steamship lines. The Black Sea and Far East basins cannot maintain the schedules and time tables for fleet operation. In the ports of Il'ichevsk, Odessa, Leningrad, Vanino, and many others the waiting times for ship loading are still very long, the plans for railroad workers to supply boxcars to ship the accumulated loads have not been fulfilled, and railroad cars in ports wait too long to be unloaded. All of this has a negative effect on fleet operation, transportation centers, and various departments as a whole.

Increased volumes for coastal and foreign cargoes have been confirmed for the second quarter of this year. Large assignments during this quarter have been given to the Far East, steamship lines regarding shipments to Magadan, Sakhalin, and Kamchatka. Complete loads have been guaranteed both by the Sakhalin and Caspian ferries. The shipment of agglomerates from Kamysh-Burun to Zhdanov for the Azovstal' plant should increase. Millions of tons of oil and petroleum products will be shipped along the coast in the Caspian, Black Sea and Far East basins. The sailors must deliver many urgent agricultural shipments.

Now is the busiest time for preparing the fleet and the ports for arctic navigation. The cargo is being gathered intensively so that all the loads can be shipped to the extreme north in full and on time, without the loss of a single day.

As before, special attention is being paid to fleet operations in the ports of Viet Nam, Kampuchea, and Cuba. A large volume of export and import goods must be shipped.

All of the above requires constant attention by the steamship lines and the GKhO to fulfilling the ongoing plans and schedules for fleet operation, enhancing business contacts with the clientele, efficient operation of transportation centers, supply and handling of railroad cars and ships, and accelerated delivery of cargo to the customers.

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FULFILLMENT OF SHIP REPAIR PLANS

Moscow VODNYY TRANSPORT in Russian 12 Apr 80 p 2

[Article: "Before Leaving on a Voyage"]

[Text] Having widely spread socialist competition at the initiative of the Astrakhan Ship Repair and Shipbuilding Plant imeni Lenin in honor of the 110th anniversary of V. I. Lenin's birth, the majority of steamship lines and enterprises are outstripping the rate for turning over the fleet in technical readiness. An extensive "ship normalization" program, the size of which is significantly larger than the one last year, is being completed.

As a whole, 91.8 percent of the labor-intensive work in winter ship repairing, including 90.7 percent of the fleet's medium repair, which significantly exceeds last year's level, had been completed as of 1 April 1980.

Freeze-out operations [vymorozochnyye raboty] have been completed for all lines except the United Lena River Steamship Line. More than 540 ships have been repaired on just the Irtyshskoye Steamship Line with the use of freeze-out operations. Freeze-out operations on 357 ships, 130 more than last year, are being completed on the United Lena River Steamship Line.

The leading collectives of steamship lines--the Moskovskoye, Severo-Zapadnoye, Vyatskoye, Belomorsko-Onezhskoye, Irtyshskoye, Zapadno-Sibirskoye and Volgotanker--are completing operations for the winter repair of the fleet and are beginning intensive spring operations to turn over ships for operation.

Under continuing freeze-up conditions, the Imeni Lenina, Third International, "Krasnyy Flot", Tol'yattinskiy, Gorodetskiy, Leningradskiy, Medvezh'egorskiy, Tyumen'skiy and Samus'skiy plants have begun putting ships in slips and drydocks for spring. More than 40 percent of the unpowered transport fleet, operating without crews, has been put in operational readiness.

The Volgo-Donskoye, Zapadno-Sibirskoye, Irtyshskoye, Vyatskoye and other steamship lines are turning over barges for operation well. Repair and preparation of the fleet is being completed at enterprises of the northern and eastern steamship lines, where the times for completing repairs in accordance with climate conditions have not yet come.

At the same time, the rate of completing labor-intensive work in ship repair, although it is now passing ahead of the planned target, is now on the whole lower than the level of last year. The Vyatskoye, Zapadnoye, and Amurskoye steamship lines are lagging behind in turning over the fleet in technical readiness. The Severnoye, Sukhonskoye, Pechorskoye, Irtyshskoye, Yeniseyskoye, Amurskoye lines and the United Lena River Steamship Line have not coped with the plan for turning over the fleet which has undergone medium repair in technical readiness. The Kuybyshevskiy Nefteflot, Volgogradskiy, Omskiy, Krasnoyarskiy, Podtesovskiy, Zhatayskiy and Krasnoarmeyskiy plants and the Osetrovskaya REB [repair and Operations Base] continue to lag behind.

Much work has been done to repair and prepare ships for operation on the minor and secondary [bokovyye] rivers. Eighty-six percent of the self-propelled and 81 percent of the unpowered fleet already has been readied. The Vyatskoye and Bel'skoye steamship lines had already ensured 100-percent readiness of shallow-draft ships by 1 April. However, the United Volga Steamship Line, the United Lena River Steamship Line, and the Kamskoye and Severnoye lines are close to completing work on such ships. But the Volgotanker line must devote special attention to preparing 10 tankers to ship petroleum products to bulk plants on secondary rivers in the deep-water spring period.

The spring period for putting the ships in slips has begun. About 30 ship-raising structures on the Volga and Don and in the Severo-Zapadnoye line already are working at full strength. An extensive program for putting in slips and drydocking over 700 ships is forthcoming. This must be conducted in an organized manner, with double-shift work and the use of progressive methods of organization and wages.

Much has been done. Nevertheless, despite the large volume of repair work completed by 1 April, many complex tasks subject to solution in the shortest periods of time still remain. It is necessary to turn over some 2,000 more self-propelled ships and over 1,000 more unpowered ships in technical readiness.

The United Lena River Steamship Line and its chief enterprises--the Zhatayskiy and Krasnoarmeyskiy plants--have not been able to fulfill the established target and have lagged in the medium repair of 26 ships (including 16 self-propelled). The Irtyshskoye, Yeniseyskoye and Sukhonskoye lines and the United Lena River Steamship Line have lagged behind in preparing the fleet for navigation throughout the entire winter and have

been slow in reducing indebtedness both in finishing labor-intensive work and in turning over ships after medium repair.

Enterprises of the United Volga Steamship Line and Volgotanker still must completely repair and prepare bunker stations. Their delay creates serious difficulties in bunkering with fuel the fleet which has already been put into operation.

First-quarter targets for repairing and shipping diesel engines from major repair have not been completely fulfilled by enterprises. This refers to the Nevskiy and Tol'yattinskiy plants. Managers of these enterprises have been criticized in reviews more than once for the slow repair of diesel engines, but the situation is being changed for the better slowly, unfortunately. Because of this, a specific number of fast ships have not been turned over in technical readiness in the time periods established by the schedule.

Enterprises are experiencing considerable difficulties in the area of material and technical supply. The results of completing winter ship repair and of the first days of turning ships over for operation disclosed substantial shortcomings in supply: shortage of diesel engines and interchangeable and replacement parts for them, lamps, safety accessories, instruments, and bedding has been discovered. This adversely affects the release of the fleet...

Icebreakers on the Volga are continuing to break up the ice. Because of the heavy ice conditions and the low water levels, the work of ship-raising structures and release of the fleet for operation is being complicated. Under cold and protracted spring conditions, ship repairers must undertake exhaustive measures to complete winter ship repair and intensify activity to turn over the fleet for operation.

The principal result of the immense labor of the collectives of ship-repairing enterprises is to put the fleet in operation on schedule.

SUMMARY OF SHIP REPAIR PROGRESS
(in percentages)

Steamship Line	Fulfillment of Repair Work	
	Planned	Actual
Volgotanker	96	97.7
United Volga	95	95.7
Moskovskoye	95	97.5
Kamskoye	95	97.5
Vyatskoye	95	95.9
Bel'skoye	96	97.0
Volgo-Donskoye	95	97.6
Kubanskoye	100	100
Severnoye	90	96.1
Sukhonskoye	95	95.7
Severo-Zapadnoye	95	95.6
Belomorsko-Onezhskoye	90	93.5
Pechorskoye	85	85.7
Zapadnoye	100	100
Irtyshskoye	85	86.1
Zapadno-Sibirskoye	89	91.8
Yeniseyskoye	85	87.4
Vostochno-Sibirskoye	85	92.2
Amurskoye	85	86.8
United Lena River	75	72.7
Glavvodput' [Main Administration for Waterways and Hydraulic Works, RSFSR Ministry of the River Fleet]	88	91.0
For the Ministry of the River Fleet as a whole	90.5	91.8

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WORK OF KRASNAYA KUZNITSA SHIP REPAIR YARD CRITICIZED

Moscow VODNYY TRANSPORT in Russian 10 Apr 80 p 2

[Article by Yu. Kolmakov: "Bonuses...For Defective Work"]

[Text] In the last days of December of last year the diesel ships "Belomorskles" and "Vologdales," already loaded with lumber for export, could not be taken out of repairs at the Krasnaya Kuznitsa Ship Repair Plant and set off on their runs at the calculated time. On the first one it took until 24 January to correct the defective work, and on the second until the 7th of February. The gas turbine ship "Umbales" had an even sadder fate. It was accepted for operations on 27 December, and on the 31st it went out on its run to Sardinia with a cargo of pulp wood, but it did not reach its goal -- on 5 January in the Norwegian Sea a fire broke out in the ship's machinery department. According to the conclusion of an authoritative commission, "because of carelessness committed during the assembling of the turbine units." Only 73 days later, after repairs in Tronheim, and then in Murmansk, was the ship able to continue its run.

The crew of the "Umbales" is one of the best in the steamship company; its collective has overfulfilled all of its planning assigments for profit levels since 1976.

Before the repairs the sailors had decided at their open party meeting to push upon all reserves, show maximum energy, and complete the repairs ahead of schedule so as to mark this year with high labor results. Now the crew is in the accident column, and it has to forget about the possibility of receiving a prize position in the competition. The low quality of the repairs will in one way or another also show up in the labor results of the crews of all of the other 12 ships which were let out of repairs in December and on the work results of the steamship company as a whole.

Here, for example, is what happened with the diesel ship "Belomorskles." It did not have its own power, the steering control did not work, there

were no whaleboats at the established places, there was not a single tested winch, and so forth, when an ice-cutter pulled it out of the plant cove to be loaded. On the 30th of December only the diesel generators had been tested and were in operation on it. Having been laid up at the plant for four months, the diesel ship was practically not ready for a single position. From 6 Setpember through 31 December the ship was officially in r pairs. The testing for defects went on almost a month and a half. Then a quiet ensued, the work was performed only in the shops, and on 20 December a storm struck. During the ten days remaining before delivery 150 plant specialists were working on the ship at the same time. In the opinion of the ship's machinists, another month of such heated work was needed to genuinely repair the ship for sailing.

And the "Krasnaya Kuznitsa?" For the second quarter of last year the plant was awarded second prize in the all-union competition, its good work according to the results of the basin competition was taken note of, and, finally, it was awarded the Red Challenge Banner of the gorkom, gorispolkom, and gorkom of the All-Union Leninist Youth Komsomol for its annual results. The entire collective of ship repair workers received an annual reward, and the incentive funds were added to. There is a paradox at hand: the plant is officially recognized as the best enterprise of the Northern Basin and of the city of Arkhangel'sk, while those people for whom it exists, that is, our seamen, clutch at their heads because no criticism could be withstood either by the quality of repairs, the schedules, or the very methods of performing the work, the crown of which the December incident is inevitably becoming.

Let us not count up the losses which were inflicted upon the steamship company by the December events. It is clear that they were great. The guilty parties for what happened have been found and punished. The order of the chief of the steamship company states that throughout all of last year ship defect detection schedules were systematically violated at the plant, as was the planned workload stipulated by the quarterly production program. The steamship company's shipments and fleet movement service repeatedly postponed the dates for putting ships into repairs, and the ship services service increased the amounts of work which had originally been determined.

The necessity to eliminate the consequences of 1,100,000 rubles worth of accident and ice damage to ships also had a negative effect upon optimizing the work of the ship repair plant in 1979. These and other undesirable phenomena became one of the reasons why it finally became necessary to release 12 ships in December, instead of the four called for by the program.

The steamship company's services have now worked out a number of measures aimed at preventing such situations in the future. These incidents also

received a principled evaluation at the last meeting of the party-administrative aktiv. Nevertheless, it would be erroneous to believe that the problem has been eliminated and that similar incidents will not be repeated. The basic premises for the abnormal situation in ship repairs have remained.

The Krasnaya Kuznitsa Ship Repair Plant is a cost accounting enterprise in the system of the Northern Maritime Steamship Company and is under its administrative authority. But is there a meeting of the interests of the fleet and of the plant which exists in order to ensure the former's effective technical operation?

No. And this divergence of interests is set in the operating planning indicators which interest an enterprise first of all in producing a high percentage of processing value (NSO), its realization and other criteria of purely industrial accounting.

These indicators do not properly stimulate a decrease in the cost of ship repairs and a decrease in their time. Rather, on the contrary -- a plant is interested in increasing the overall costs of fleet repairs, since this improves the basic technical and economic indicators of its work, even despite the circumstance that this at the same time helps to prolong the time that ships are in the plant cove and so forth.

The problem is not new. It is not the first year that a great deal has been said and written about it; however, specialists have still not proposed a solution capable of changing the paradoxical situation in which the ship repair industry which is in the same economic system as the Ministry of the Maritime Fleet and which has the final goal of increasing the carrying capacity of the fleet with maximum profits and profitability plays the opposite role. Matters have not moved beyond individual experiments.

And so it happens that there continues to be a divergence between the interests of ship repair workers and seamen which gives rise to distrust between them and to the perplexity of the latter: a ship is taken out of the plant with disassembled mechanisms, but the plant occupies prize positions in competitions?

Take, for example, the steamship company's ill-fated fourth quarter of last year. For the plant it ended with splendid results: the amount of output in NSO was fulfilled by 101.8 percent, the amount of realization came to 107 percent, profits to 103.3 percent, the labor productivity indicator -- 103 percent, and return on capital -- 102.5 percent. In a word, all of the planning figures were well covered both for work results for the last quarter and for the year.

There is probably no need for a further enumeration of the causes and consequences of the situation which has developed. But since it is obvious that the fleet of the Northern Sea Route is getting older, and the duration of its service in the ices is approaching the maximum, the problem of organizing repairs will become increasingly acute with each passing year until a final solution is found.

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BRIEFS

MAGADAN PORT--The level of mechanization at the Magadan mercantile seaport is currently 82 percent and by 1990 it will be increased to 100 percent. The port's changeover to year-round navigation began following the CPSU Central Committee's resolution on the initiative of Ilichevsk port workers in March 1974. The port has been equipped with powerful electrical cranes, electric and automatic loaders and other machinery. Much has changed in the port during the 10th Five-Year Plan period, including completion of the sixth mooring, commissioning of a container terminal and construction of other facilities. [Vladivostok Maritime Service in Russian to the Pacific Far East 0710 GMT 6 May 80]

ANADYR PORT--During the past 2 years the Anadyr port has reclaimed more than 100 hectares of area from the sea and is now capable of handling modern oceangoing vessels. The water area is currently covered with ice which is 1.5 meters thick. Although spring arrives late in the port, it has already completed nearly 80 percent of all preparations for the this year's navigation season. [Vladivostok Maritime Service in Russian to the Pacific Far East 0710 GMT 6 May 80]

FAR EASTERN STEAMSHIP LINE--The Far Eastern Steamship Line has some 270 steamships ranging in load-carrying capacity from 1,000 to 24,000 tons, 15 passenger ships and several icebreakers, including the largest diesel-icebreakers Yermak and Admiral Makarov. In 1979 alone the line's vessels made some 5,000 calls at foreign ports, including ports of socialist and capitalist countries, visited nearly 80 countries and territories and nearly 300 different ports. The steamship line has 10 ports, beginning with Posyet near the DPRK border and including Vladivostok, Nakhodka, Vostochnyy, Magadan, Anadyr, Ugolnoye, Egvekinot, Provideniya and Pevek. The line also has four ship repair plants, including the Slavyanka, Nakhodka, Vladivostok and Sovetskaya Gavan plants. The steamship line has its own construction trust. [Vladivostok Maritime Service in Russian (SKT) 0710 GMT 25 Apr 80]

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